Motmot
Innovation Memo

The FutureList

March
2025

MEET THE INNOVATORS

“At Motmot, we’re making critical water infrastructure visible—giving cities the data they need to protect and sustain their drinking water systems before problems arise.

What our true mission is, it's about public education. It’s about people realizing there’s a whole world underneath our feet that we truly just take for granted.”

A note from the Co-Founder & CEO, Elliot Smith

Team

Elliot Smith
Co- Founder
& CEO

Demetris Coleman
Co- Founder
& CTO

EXECUTIVE SUMMARY

Sector:
Infrastructure

Sub-sector:
Asset Management Technology

Website:
www.motmot.ai

Funding Stage:
Pre-seed

Founded:
2023

Location:
Detroit, Michigan - USA

Business Model:
B2G

Motmot is redefining how municipalities manage aging drinking water infrastructure through autonomous robotic inspection technology. With **45% of U.S. water mains exceeding their designed lifespan**, cities face rising maintenance costs, water loss, and system failures. Motmot's **Autonomous Underwater Robot (AUR)** provides a cost-effective, data-driven solution by **inspecting live, pressurized water mains without service disruptions**—empowering communities with actionable data to prioritize repairs and reduce emergency breakages.

Since launching in Detroit, Motmot has secured $1.34M in pre-seed funding, partnered with top universities and the NSF, and engaged in pilot programs with major water authorities. Its AI-driven robotics platform cuts inspection costs by up to 85%, enabling scalable, high-resolution pipeline assessments. With a hardware-enabled data model and per-mile service approach, Motmot creates recurring revenue for municipalities while making pipeline assessments more efficient, affordable, and proactive.

INNOVATION SPOTLIGHT

Motmot's Autonomous Underwater Robot (AUR) enables municipalities to inspect live, pressurized water mains without service disruptions, delivering high-resolution condition data for post-processing and analysis. The system generates a comprehensive Risk Assessment Profile, providing detailed pipeline condition reports, defect mapping, and predictive maintenance insights to help cities prioritize repairs, extend infrastructure lifespan, and reduce costly emergency failures. With SLAM-based localization, energy harvesting for extended deployment, and AI-driven defect detection, Motmot offers a scalable, data-driven approach to proactive water system management.

Key Features:

Autonomous Underwater Robotics (AUR) – A self-navigating robotic system that inspects drinking water pipelines without disrupting service, covering 10x the distance of traditional methods.

Multi-Sensor Monitoring – Integrates high-definition cameras, acoustic sensors, chlorine sensors, and in-pipe illumination to detect leaks, contamination, and structural weaknesses.

Predictive Analytics & Risk Assessment – Uses AI-driven models to assess pipeline conditions, predict failures, and estimate the remaining useful life (RUL) of infrastructure.

SLAM-Based Navigation & Mapping – Uses Simultaneous Localization and Mapping (SLAM) to generate detailed pipeline maps and track it's location while it traverses branched pipe networks.

INNOVATION SPOTLIGHT

Scalability of Innnovation

Motmot's autonomous robotics and AI-driven analytics scale effortlessly, covering 10x the distance of traditional inspections. Designed for real-time, continuous monitoring, it adapts to utilities of all sizes, enabling efficient, data-driven water management at scale. With automated risk assessments, municipalities can proactively maintain infrastructure and prevent costly failures.

Future Outlook

Motmot is preparing to launch its autonomous pipeline inspection technology. Currently tested at Michigan State University and the University of Michigan, the technology is being refined for deployment. Moving forward, Motmot aims to enhance AI, expand robotic capabilities, and scale municipal partnerships to set the standard for predictive water system resilience.

Business Model Innovation

Motmot transforms water infrastructure management with a pay-per-mile model and long-term contracts for ongoing inspections. Their AI-driven, autonomous robotics replace costly manual inspections with continuous, predictive maintenance, helping municipalities optimize spending, prevent failures, and ensure water system resilience.

Partnerships

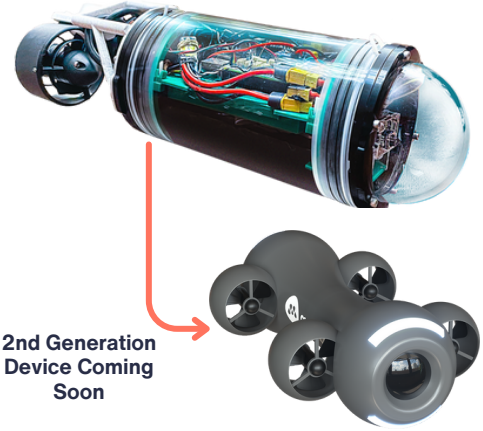
Motmot is validating its technology with **MSU Water Works.** They serve as their first pilot partner, testing the system within a live 16-inch water main. At the **American Center for Mobility,** Motmot is conducting large-scale testing across 16 miles of distribution to refine its capabilities Additionally, Motmot has secured eight paid pilot partnerships with **12 Michigan cities,** where straight-line inspections will cover 2–15 miles per city, driving real-world deployment and municipal collaboration.

INNOVATION IN VIEW

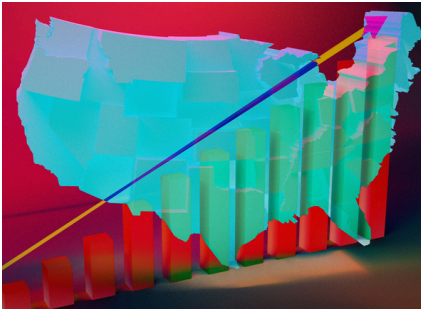
Motmot's autonomous robotics provide real-time, in-pipe inspections, using multi-sensor monitoring to detect leaks, contamination, and structural weaknesses.

Beyond monitoring, Motmot's interactive tool informs the public with state-specific water infrastructure grades, driving awareness and community engagement in water safety.

Comprehensive Pipeline Inspection



2nd Generation Device Coming Soon



Explore Your State's Water Infrastructure Grade - on Motmot website

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ABOUT THE FUTURELIST

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